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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,332	08/01/2006	Gracme Mein	5458ST-1	1070
23442	7590	07/30/2010		
SHERIDAN ROSS PC 1560 BROADWAY SUITE 1200 DENVER, CO 80202			EXAMINER HAYES, KRISTEN C	
			ART UNIT 3643	PAPER NUMBER
			MAIL DATE 07/30/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/553,332

**Applicant(s)**

MEIN, GRAEME

**Examiner**

KRISTEN C. HAYES

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3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05/27/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 34-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 34-55 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. Claims 34, 51 and 55 recite the limitation of the controller controlling the sensor. This limitation is not found in the original disclosure.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 51-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Van den Berg et al. US 6,823,817 (hereinafter Van den Berg).
6. Regarding claims 51 and 55, Van den Berg discloses a sensor apparatus used with milk extraction machinery including a plurality of extraction elements (2), the sensor apparatus including a single collection line (Van den Berg, Figures 1, 2) connected to the plurality of

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extraction elements, wherein the plurality of extraction elements extract milk into the single collection line; a sensor (12) associated with the collection line, wherein the sensor detects milk abnormalities by comparing a sensor output signal indicating a value of the milk extracted from an udder quarter by an extraction element and a sensor output signal indicating the value of the milk from other quarters of the same udder by an alternative extraction element (Van den Berg, column 7: line 63-column 8: line 6); a controller (13) controlling the activation of the extraction elements (Van den Berg, column 7: lines 27-28, column 8: lines 21-22), the sensor (as best understood); and a delay period (Van den Berg, column 8: lines 20-25), wherein the controller activates a single extraction element and the sensor senses extracted milk from the activated extraction element, and wherein the activating, sensing and delay period are repeated for an additional extraction element (in that each extraction element performs the same way).

7. Regarding claim 52, Van den Berg further discloses the sensor measuring electrical conductivity (Van den Berg, column 5: line 44).
8. Regarding claim 53, Van den Berg further discloses an indicator that receives an indication of milk abnormality, and wherein the indicator signals an alarm (Van den Berg, column 8: lines 50-55).
9. Regarding claim 54, Van den Berg further discloses a diversion system (15) associated with the indicator.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 34-42 and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van den Berg et al. US 6,823,817 (hereinafter Van den Berg) in view of Seaborne US 4,538,634.

12. Regarding claims 34 and 46, Van den Berg discloses a milk extraction machinery sensor apparatus including a plurality of extraction elements (2), the sensor apparatus including a single collection line (Van den Berg, Figure 1, 2), wherein the plurality of extraction elements extract milk into the single collection line; a sensor (12) associated with the single collection line, wherein the sensor detects an indicator of mastitis (Van den Berg, column 5: lines 44-46); and a controller (13) that controls activation and timing of the extraction elements (Van den Berg, column 7: lines 27-28), the sensor (as best understood); and a delay period (Van den Berg, column 8: lines 20-25); wherein the controller activates the extraction elements (Van den Berg, column 7: lines 27-28) and the sensor senses extracted milk from the activated extraction elements (Van den Berg, column 5: lines 46-50), followed by the controller entering delay period (Van den Berg, column 8: lines 20-25). Not specifically disclosed are the extraction elements being activated biblically, sequentially or randomly. Seaborne teaches the extraction elements being activated randomly (Seaborne, column 1: lines 32-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to activate the extraction elements of Van den Berg randomly, as taught by Seaborne, so that the same extraction element would not continually be activated, which could cause incorrect readings (i.e., an error in one specific extraction element).

13. Regarding claim 35, Van den Berg in view of Seaborne further discloses all of the extracted milk passes through the single collection line (Van den Berg, Figure 2).

14. Regarding claim 36, Van den Berg in view of Seaborne further discloses the sensor measuring electrical conductivity (Van den Berg, column 5: line 44).
15. Regarding claim 37, Van den Berg in view of Seaborne further discloses foremilk being extracted by the plurality of extraction elements (in that foremilk would be extracted when the teat cup was activated).
16. Regarding claim 38, Van den Berg in view of Seaborne further discloses each of the extraction elements comprising a single teatcup (2) associated with a single pulsator line (9) (Van den Berg, column 5: lines 20-21).
17. Regarding claim 39, Van den Berg in view of Seaborne further discloses the controller comprising a pulsator controller (Van den Berg, column 7: lines 27-28).
18. Regarding claims 40-42, Van den Berg in view of Seaborne discloses the device of claim 39, but does not disclose activating a pulsator valve associated with the pulsator line; the threshold vacuum level having a negative air pressure; or the teatcup being pulsated by a cyclic change in air pressure. However, the examiner takes official notice that these are operations associated with typical pulsation systems in a milking system (as disclosed by US 4,538,634; US 4,572,104). It would have been obvious to one of ordinary skill in the art at the time of the invention for the pulsator to perform the claimed actions so as to provide the predictable result of operating the pulsator line to be able to extract milk.
19. Regarding claim 47, Van den Berg in view of Seaborne further discloses an indicator that receives an output signal from the sensor and issuing an alarm signal indicating abnormal milk has been delivered from an extraction element (Van den Berg, column 8: lines 50-55).
20. Regarding claim 48, Van den Berg in view of Seaborne further discloses a diversion system (15) associated with the indicator to isolate abnormal milk.

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21. Regarding claim 49, Van den Berg in view of Seaborne further discloses the milk abnormality being detected through a comparison between sensor output signal indicating the detected property of the milk extracted from an udder quarter or half of the dairy animal by an extraction element and the sensor output signal indicating the detected property of the milk extracted from other quarters or half of the same udder by an alternative extraction element (Van den Berg, column 7: line 63-column 8: line 6).

22. Regarding claim 50, Van den Berg in view of Seaborne further discloses a rolling average of sensor readings being used to detect abnormalities in extracted milk (Van den Berg, column 7: lines 1-10).

23. Claim 34, 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van den Berg et al. US 6,823,817 (hereinafter Van den Berg) in view of Nordegren et al. US 4,011,838 (hereinafter Nordegren).

24. Regarding claims 34 and 45, Van den Berg discloses a milk extraction machinery sensor apparatus including a plurality of extraction elements (2), the sensor apparatus including a single collection line (Van den Berg, Figure 1, 2), wherein the plurality of extraction elements extract milk into the single collection line; a sensor (12) associated with the single collection line, wherein the sensor detects an indicator of mastitis (Van den Berg, column 5: lines 44-46); and a controller (13) that controls activation and timing of the extraction elements (Van den Berg, column 7: lines 27-28), the sensor (as best understood); and a delay period (Van den Berg, column 8: lines 20-25). Not specifically disclosed are the extraction elements being activated cyclically, sequentially or randomly. Nordegren teaches the extraction elements being activated sequentially (Nordegren, abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to activate the extraction elements of Van den Berg sequentially, as

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taught by Nordegren, so that the same extraction element would not continually be activated, which could cause incorrect readings (i.e., an error in one specific extraction element).

25. Regarding claim 43, Van den Berg in view of Nordegren further discloses only one of the plurality of extraction elements being activated at one time (Nordegren, abstract, in that each of the teat cups can be operated independently).

26. Regarding claim 44, Van den Berg in view of Nordegren further discloses a pair of the plurality of extraction elements is activated at one time (Nordegren, abstract, if the extraction elements are capable of being operated one at a time, they are capable of being operated two at a time).

### ***Response to Arguments***

27. Applicant's arguments filed 05/27/2010 have been fully considered but they are not persuasive.

28. Van den Berg, Nordegren and Seaborne disclose the limitations of the new claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTEN C. HAYES whose telephone number is (571)270-3093. The examiner can normally be reached on Monday-Thursday, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571)272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCH  
26 July 2010

/Rob Swiatek/  
Primary Examiner, Art Unit 3643  
29 July 2010